



Implementing Cisco SD-WAN Solutions

DURATION: 5 DAYS

COURSE CODE: ENSDWI

FORMAT: LECTURE/LAB

COURSE DESCRIPTION

The Implementing Cisco SD-WAN Solutions (ENSDWI) v2.0 course gives you training about how to design, deploy, configure, and manage your Cisco® Software-Defined WAN (SD-WAN) solution in a large-scale live network, including how to migrate from legacy WAN to SD-WAN. You will learn best practices for configuring routing protocols in the data center and the branch, as well as how to implement advanced control, data, and application-aware policies. The course also covers SD-WAN deployment and migration options, placement of controllers, how to deploy WAN Edge devices, and how to configure Direct Internet Access (DIA) breakout. The course looks at the different Cisco SD-WAN security options available, such as application-aware enterprise firewall, Intrusion Prevention System (IPS), URL filtering, Cisco Advanced Malware Protection (AMP), Secure Sockets Layer/Transport Layer Security (SSL/TLS) proxy, and Cisco Umbrella® Secure Internet Gateway (SIG).

This course helps you prepare to take the Implementing Cisco SD-WAN Solutions (300-415 ENSDWI) exam which is part of the CCNP® Enterprise certification. You will also earn 32 Continuing Education (CE) credits toward recertification.

WHO SHOULD ATTEND

System installers
System integrators
System administrators
Network administrators
Solutions designers

PREREQUISITES

Knowledge of Software-Defined Networking (SDN) concepts as applied to large-scale live network deployments

Strong understanding of enterprise WAN design

Strong understanding of routing protocol operation, including both interior and exterior routing protocol operation

Familiarity with Transport Layer Security (TLS) and IP Security (IPSec)

These recommended Cisco offerings that may help you meet these prerequisites:

- Implementing and Administering Cisco Solutions (CCNA®)
- Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

LEARNING OBJECTIVES

Describe the Cisco SD-WAN solution and how modes of operation differ in traditional WAN versus SD-WAN

Describe options for Cisco SD-WAN cloud and on-premises deployment

Explain how to deploy WAN Edge devices

Review the Zero-Touch Provisioning (ZTP) process and examine technical specifics for on -premises deployment

Review the device configuration template and describe new features of device configuration templates

Describe options for providing scalability, high availability, and redundancy

Explain how dynamic routing protocols are deployed in an SD-WAN environment, on the service side and transport side

Describe Cisco SD-WAN policy concepts, which includes how policies are defined, attached, distributed, and applied

Define and implement advanced control policies, such as policies for custom topologies and service insertion

Identify and implement advanced data policies, such as policies for traffic engineering and QoS

Define and implement an Application-Aware Routing (AAR) policy

Implement Direct Internet Access (DIA) and Cisco SD-WAN Cloud OnRamp options

Describe Cisco SD-WAN security components and integration

Describe how to design pure and hybrid Cisco SD-WAN solutions, as well as how to perform a migration to Cisco SD-WAN

Describe Cisco SD-WAN Day-2 operations, such as monitoring, reporting, logging, troubleshooting, and upgrading

Describe Cisco SD-WAN support for multicast

COURSE OUTLINE

1. Examining the Cisco SD WAN Architecture
2. Examining Cisco SD-WAN Deployment Options
3. Deploying WAN Edge Devices
4. Onboarding WAN Edge Devices with ZTP and PnP
5. Using Device Configuration Templates
6. Exploring Redundancy, High Availability, and Scalability
7. Enabling Service-Side and Transport-Side Routing
8. Understanding Cisco SD-WAN Policy Configuration Basics
9. Defining Advanced Control Policies
10. Implementing AAR
11. Examining Direct Internet Access and Cloud Deployment Options

LABS

1. Deploy Cisco SD-WAN Controllers
2. Add a WAN Edge Router Using ZTP
3. Deploy Cisco SD-WAN Device Using Configuration Templates
4. Configure Cisco SD-WAN Controller Affinity
5. Implement Service Side Routing Protocols
6. Implement Transport Location (TLOC) Extensions
7. Implement Control Policies
8. Implement Data Policies
9. Implement Application-Aware Routing
10. Implement Branch and Regional Internet Breakouts
11. Migrate Branch Sites
12. Perform Cisco SD-WAN Software Upgrade